

### **REMARKS**

The Examiner is thanked for the careful review of this Application. The Applicants herein confirm that during a telephonic conversation with the Examiner Bibi S. Carrillo on March 3, 2005, the Applicants elected, without traverse, to prosecute Group I claims (i.e., claims 1-16).

Claims 1-16 and 24-28 are pending after entry of the present Amendment. Please add new claims 24-28 and cancel claims 17-23. Amendments were made to the specification to correct typographical errors. Amendments were made to the claims to correct typographical errors and better define the invention. The amendments or the new claims do not introduce new matter.

#### **Rejections under 35 U.S.C. § 112, First Paragraph:**

The Office has rejected claims 1-16 under 35 U.S.C. § 112, first paragraph for failing to provide enablement for any type of substrate. However, the Office has acknowledged that the specification provides enablement for semiconductor devices. Therefore, the Applicants have amended the claims to specifically recite semiconductor substrates. As such, the Applicants respectfully request that rejection of the claims under 35 U.S.C. § 112, first paragraph be withdrawn in view of the amendments to the claim.

#### **Rejections under 35 U.S.C. § 112, Second Paragraph:**

The Office has rejected claims 1-16 for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. The Applicants respectfully request that section 112, second paragraph rejection of claims be withdrawn in view of the clarifying amendments to the claims. For instance, the Applicants have amended the phrase "brush scrubbing fluid chemistry" to "brush scrubbing chemistry." The phrase brush scrubbing chemistry has been implemented by the Applicants throughout the specification and refers to the chemistry used while the substrate back surface is being brush scrubbed. Similarly, the term "meniscus" has been changed to "fluid meniscus." As described in the specification (e.g., paragraph 55), meniscus is a portion of fluids defined

between the front and back proximity heads and front and back surfaces of the substrates, respectively. Furthermore, as described in the specification, one of such fluids is chemistry.

The Applicants have further amended independent claim 1 to include drying of the substrate front and back surfaces using the front and back fluid menisci and to further clarify the scanning operation. The Applicants have further amended independent claim 10 to specifically recite a method for preparing a semiconductor substrate. As such, amending the claim to recite the drying operation is moot. Still further, the Applicants have amended dependent claim 2 to clarify what the Applicants mean by the “chemistry of the front and back meniscus.” Yet further, the Applicants have deleted the term “substantially” from claims 4, 5, and 16. Still further, the phrase “front side film” has been replaced by the “semiconductor substrate front surface.”

Additionally, the Applicants respectfully submit that contrary to the Office’s interpretation, specific terms and phrases found to be unclear and indefinite by the Office are clear and definite when read in light of the specification and given the respective broadest reasonable interpretation consistent with the specification. *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). By way of example, the phrase “brush scrubbing chemistry” is clear as the phrase refers to the chemistry implemented during the operation of brush scrubbing the semiconductor substrate backside. For support, the Applicants draw the Office’s attention to the exemplary paragraphs 36, 39, 48, and 50 wherein the Applicants describe the supplying of the brush scrubbing chemistry to the brush and brush interface, the mixing of raw chemistries A and B and supplying of same to the brush during the scrubbing operation, and applying of the brush and the brush scrubbing chemistry to the substrate backside so as to brush scrub the substrate backside. As to the term chemistry, the Applicants respectfully submit that the term chemistry is a term well known by one of ordinary skill in the art of semiconductor manufacturing. In the same manner, brush scrubbing substrate surfaces using chemistry is an operation well known by one of ordinary skill in the art.

Still further, implementing a chemistry in the front and back fluid menisci that is “compatible” with the brush scrubbing chemistry is well understood by one of ordinary skill in the field of semiconductor manufacturing, and more specifically, the filed of semiconductor substrate cleaning and drying wherein different chemistries are implemented. The term “compatible” as used in the subject invention is consistent with the well-established

definition of the term. For instance, the term "compatible" has been defined in the Webster's dictionary as "capable of existing together in harmony" or "capable of forming a homogeneous mixture that neither separates nor is altered by chemical interaction." Furthermore, the specification provides examples of compatible and non-compatible chemistries, as also acknowledged by the Office. Thus, one of ordinary skill in the art is well aware of what is meant by "compatible chemistries" when the claims are read in view of the specification.

Still further, what is included in the chemistry in the front and back fluid menisci is clear in view of the specification. For instance, in paragraph 55, the Applicants have described that the back meniscus is generated using the back cleaning chemistry, if any, or DIW and IPA vapor. The Applicants have further described that the chemistry is the chemistry applied to the substrate front and backside through the proximity heads. However, as described by the Applicants in the specification, liquid contaminants defined over the substrate surfaces, if any, can be included in the meniscus as the meniscus is moving along the substrate surfaces. Thus, the liquid contaminants are not introduced through the proximity heads.

New claims 24-28 include subject matter defined in claims 10-14, and claims 7 and 8.

In view of the foregoing, the Applicants respectfully submit that all of the pending claims 1-16 and 24-28 are in condition for allowance. Accordingly, a Notice of Allowance is respectfully requested. If the Examiner has any questions concerning the present Amendment, the Examiner is kindly requested to contact the undersigned at (408) 774-6913. If any additional fees are due in connection with the filing of this paper, the Commissioner is authorized to charge such fees to Deposit Account No. 50-0805 (Order No. LAM2P463).

Respectfully submitted,  
MARTINE PENILLA & GENCARELLA, LLP



Fariba Yadegar-Bandari, Esq.  
Reg. No. 53,805

710 Lakeway Drive, Suite 200  
Sunnyvale, CA 94085  
Telephone: (408) 774-6913  
Facsimile: (408) 749-6901  
**Customer Number 25920**